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<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/080,826	HSU ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Qutub Ghulamali	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 12/20/2006.
2. ☒ The allowed claim(s) is/are 1-9, 19-31, 36, 41-65, 72-120, 124-127.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |  |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application                                |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date _____    | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                              |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance             |
|  | 9. <input type="checkbox"/> Other _____  |

### **DETAILED ACTION**

1. This Office Action is responsive to the After Final Remarks/Amendment filed 12/20/2006.

#### ***Response to Remarks/Amendment***

2. Applicant's remarks/amendment, filed 12/20/2006, have been fully considered, and as a result claims 1-9, 19-31, 36, 41-65, 72-120, 124-127, are now indicated allowable.

#### ***Reasons for Allowance***

3. Applicant's remarks/amendment after final, see pages 34-40, filed 12/20/2006, with respect to rejection of claims 1-3, 9, 19-21, 27-35, 37-44, 46-53, 55-65, 69-77, 83-86, 88-95, 97-104, 106-120, have been fully considered, and after a further search and examination in light of the amendment, claims 1-9, 19-31, 36, 41-65, 72-120, 124-127; are now indicated allowable. However, in order to advance prosecution in the case, an examiners amendment is considered necessary to correct for some minor deficiency in the claim(s). The examiners amendment follows.

### **EXAMINER'S AMENDMENT**

4. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided

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by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Damian Aquino on 01/17/2007.

The application has been amended as follows:

**IN THE CLAIMS:**

Claims 32-35, 37-40 and 69-71 stand cancelled.

Claim 58, line 1, the claim dependency "4150", has been replaced with -- 50 --.

***Reason for Allowance***

5. Claims 1-9, 19-31, 36, 41-65, 72-120, 124-127 allowed.

6. The following is an examiner's statement of reasons for allowance:

The prior art of record in combination with other claimed limitations neither teaches nor renders obvious a decoder comprising a demodulation unit coupled to said feedback equalizer and comprising subsymbol decoding processing logic for generating decoded subsymbol information upon receiving the second number of chips of the symbol; and a remodulation unit coupled to said demodulation unit and said feedback equalizer, said remodulation unit generating a subsymbol waveform corresponding to the decoded subsymbol information. Such limitations as recited in independent claims 4 and 22 are neither anticipated nor rendered obvious by the prior art.

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The prior art of record in combination with other claimed limitations neither teaches nor renders obvious a decoding unit comprising a partial correlation logic for generating a decoded subsymbol upon receipt of a second number of chips of the received symbols and before at least one of receiving, decoding and deciding the first number of chips of the received symbol, the second number being less than the first number and a remodulation unit coupled to said partial correlation logic of said demodulation unit and said decision feedback equalizer, said remodulation unit for generating a subsymbol waveform corresponding to the decoded subsymbol, said decision feedback equalizer to equalize the modulated remodulated signal using the subsymbol waveform. Such limitations as recited in independent claim 78 is neither anticipated nor rendered obvious by the prior art.

The prior art of record in combination with other claimed limitations neither teaches nor renders obvious a decoder comprising symbol correlator means for correlating the perceived second number of chips against a subset of valid candidate symbols to obtain a best match candidate, said demodulation means generating the decoded subsymbol information based on the best match candidate. Such limitations as recited in independent claims 36, 45, 87, 96 and 105 is neither anticipated nor rendered obvious by the prior art.

7. Claims 2-3, 5-9, 20-21, 23-31, 42-44, 46-49, 51-53, 55-58, 60-65, 73-74, 76-77, 79-82, 84-86, 88-91, 93-95, 97-100, 102104, 106-113, 115-120, 125-127, are allowed by virtue of their dependency to base claims highlighted above.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


***Contact Information***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qutub Ghulamali whose telephone number is (571) 272-3014. The examiner can normally be reached on Monday-Friday, 7:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

QG.  
January 17, 2007.

  
MOHAMMED GHAYOUR  
SUPERVISORY PATENT EXAMINER